REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

A. Claim amendments

Claim 1 is amended to remove the recitation of a carrier fluid, and to recite the compositions of the first lower and second upper lacquer layers. In particular, features of claims 5-9 and 11 are added to amended claim 1. It is respectfully submitted that no new matter is added, since the changes merely merge the subject matter of previously presented claims, and support for the amendments may be found, for example, at least in paragraphs [0014], [0015], [0018] and [0019] of the accompanying description in the specification as originally filed.

Claims 5-9 are canceled.

Claims 10-12 are amended to be consistent with amended claim 1.

Claims 2-4, 13-15, and 17-26 are left unchanged.

Claim 16 remains canceled.

Claims 27-47 remain withdrawn

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

B. Rejection of claims 1-15 and 17-26 under 35 U.S.C. § 112 first and second paragraphs

Reconsideration of these rejections is respectfully requested, in view of the amendment to claim 1, on the basis that the identified language, "a carrier fluid," has been removed from the claim.

Accordingly, amended claim 1 does not contain new matter, and is also clear and definite.

Therefore, withdrawal of these rejections is kindly requested.

2. Rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*)

Reconsideration of this rejection is respectfully requested, in view of the amendments to claim 1, on the basis that the *Kaule* patent fails to disclose each and every recited element of amended claim 1, and on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to amended claim 1.

As amended, claim 1 is not a product-by-process claim, since amended claim 1 specifically recites the compositions of the first lower and second upper lacquer layers, including that the first lower lacquer layer is based on a water-based dispersion of aliphatic polyester polyurethanes or styrene-acrylic polyurethanes, which is not disclosed in the *Kaule* patent.

Further, the recitation of a first lower one of said lacquer layers being formed by a physically drying liquid lacquer layer, even if considered to be a process recitation, results in a structurally different layer than is disclosed by the *Kaule* patent.

As discussed in detail in the response filed June 25, 2009, the terms "reaction lacquer" and "reaction adhesive" are defined in the *Kaule* patent as lacquers or adhesives that cure, i.e. polymerize or cross-link, irreversibly under specific physical or chemical

activation (col. 3, lines 53-58). In other words, irreversible chemical bonds are formed during the curing process. Further, during the process of "curing" a liquid composition may become a solid, not by removal of the liquid constituents thereof, bur rather, by the cross-linking and formation of chemical bonds.

In contrast, amended claim 1 recites a physically drying liquid lacquer layer, which does not involve the formation of any chemical bonds, and which is not comparable to "curing."

A physically drying lacquer layer hardens by virtue of evaporation of liquid carrier components of the lacquer layer to form a solid, without any cross-linking or altering of the chemical formula of the lacquer layer, but only by removal of the liquid constituents. Thus, a physically drying lacquer layer does not involve cross-linking or otherwise altering the chemical formula of the lacquer layer.

It can be seen then, that the physically drying liquid lacquer layer recited in amended claim 1 is structurally different from the reaction lacquer of the *Kaule* patent, since the reaction lacquer of the *Kaule* patent has polymerized or cross-linked components, and the physically drying liquid lacquer layer recited in amended claim 1 does not.

Therefore, since the *Kaule* patent fails to disclose every feature of amended claim 1, withdrawal of this rejection is respectfully requested.

Further, the *Kaule* patent specifically discloses that the lower reaction layer 4 and the upper reaction layer 2 are largely homogenous chemically, in order to provide a very firm compound in areas where the metal layer contains pores or microcracks, and since the UV-curable or chemically curable layers are irreversibly cured, it is impossible to detach the layers later.

Thus, a person having ordinary skill in the art at the time the invention was made would not have substituted a physically drying liquid lacquer layer, which does not polymerize or cross-link irreversibly, for the chemically curable reaction lacquer or

adhesive that forms the lower layer 4 of the *Kaule* patent, since such a substitution would defeat the intended purpose of using the homogenous chemically same lower and upper layers 4, 2 of the *Kaule* patent.

Accordingly, since a person having ordinary skill in the art at the time the invention was made would not have substituted a physically drying liquid lacquer layer, for the UV-curable or chemically curable reaction lacquer or adhesive that forms the lower layer 4 of the *Kaule* patent, a *prima facie* case of obviousness with respect to amended claim 1 cannot be established. Therefore, withdrawal of this rejection is respectfully requested.

3. Rejection of claims 1, 3-11, 13-15, 17, 18, 21, 24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*) in view of U.S. patent no. 5,141,983 (*Hasegawa et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to amended claim 1, from which the remaining pending claims depend.

As discussed above, claim 1 is amended to recite that the first lower lacquer layer is formed by a physically drying liquid lacquer layer based on a water-based dispersion of aliphatic polyester polyurethanes or styrene-acrylic polyurethanes.

As acknowledged on page 7 of the Office action, the *Kaule* patent fails to disclose a physically drying liquid lacquer layer for the first lower lacquer layer of the *Kaule* patent.

Further, while the Office action also indicates on page 7 that the *Kaule* patent discloses that the adhesive can be a lacquer that cures under a specific physical action (physical drying) (col. 3, lines 1-9 and 51-60), as discussed above, and in more detail below, physical drying is not the same as "curing," since there is no cross-linking or chemical bonds formed during physical drying, as there is by "curing."

In particular, the passages (col. 3, lines 1-9 and 51-60) of the *Kaule* patent relied upon by the Office action never use the phrase "physically drying," but rather, unambiguously require chemical bonds to form (cross-linking) irreversibly under specific physical or chemical activation.

Examples of physical activation include activation by radiation or heat, which causes cross-linking or chemical bonds to form. Similarly, chemical activation is activation by polymerization initiators used to initiate the cross-linking or to cause chemical bonds to form. For example, see Fig. 1 and col. 4, lines 17-41 of the *Kaule* patent which describe UV-curable (polymerization or cross-linking upon physical activation) or chemically curable (polymerization or cross-linking upon chemical activation) layers of reaction lacquers.

Further, the use of the term "reaction" lacquer, and in particular since this term is defined as previously discussed, indicates that a chemical "reaction," for example cross-linking or bond formation, takes place, so that there is a chemical change in the reaction layer during curing.

Thus, the *Kaule* patent simply does not disclose a first lower lacquer layer formed by a physically drying liquid lacquer layer as recited in amended claim 1.

Similarly, the *Hasegawa* patent fails to disclose the use of a first lower lacquer layer formed by a physically drying liquid lacquer layer as recited in amended claim 1.

The Office action on page 7 indicates that the *Hasegawa* patent discloses aqueous coating compositions of a "polyurethane resin and an acrylic copolymer which, upon drying (activated by physically drying), bond together to form a coating film."

While the phrase "allowed to dry" is used in claim 1 of the *Hasegawa* patent, this phrase is used in the context of forming a bond between the hydrazine terminal groups of the polyurethane resin and the carbonyl group of amido group of the acrylic copolymer (claim 1), which, as discussed in detail above, the formation of a bond is a chemical alteration that does not occur during physical drying, as recited by amended claim 1.

This is further evidenced by the discussion in the *Hasegawa* patent that it is *necessary* to functionally bond, not merely mix, an aqueous polyurethane resin and an aqueous dispersion of an acrylic copolymer (col. 2, lines 13-16).

Thus, it can be seen that the *Hasegawa* patent also fails to disclose the use of a first lower lacquer layer formed by a physically drying liquid lacquer layer as recited in amended claim 1.

Further, the *Hasegawa* patent fails to disclose protective layers having a two-layer-structure. Thus, a person having ordinary skill in the art would not have looked to the *Hasegawa* patent for combination with the *Kaule* patent.

Further, as discussed above, since the *Kaule* patent specifically discloses that the lower reaction layer 4 and the upper reaction layer 2 are largely homogenous chemically, a person having ordinary skill in the art at the time the invention was made would not have substituted the aqueous coating compositions of a polyurethane resin and an acrylic copolymer of the *Hasegawa* patent for the reaction lacquer or adhesive that forms the lower layer 4 of the *Kaule* patent, since such a substitution would defeat the intended purpose of using the homogenous chemically same lower and upper layers 4, 2 of the *Kaule* patent.

Further still, even if the aqueous coating compositions of a polyurethane resin and an acrylic copolymer of the *Hasegawa* patent were substituted for the reaction lacquer or adhesive that forms the lower layer 4 of the *Kaule* patent, since neither the *Hasegawa* patent nor the *Kaule* patent disclose a physically drying liquid lacquer layer as recited in amended claim 1, the proposed combination fails to disclose every feature of amended claim 1.

For these reasons, it is respectfully submitted that a person having ordinary skill in the art would not have combined the features of the *Kaule* and *Hasegawa* patents, and further that the proposed combination of the *Kaule* and *Hasegawa* patents fails to disclose every feature of amended claim 1. Thus, a *prima facie* case of obviousness

cannot be established with respect to amended claim 1, from which the remaining pending claims depend, and withdrawal of this rejection is kindly requested.

4. Rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*) in view of U.S. patent no. 5,141,983 (*Hasegawa et al.*) and further in view of U.S. patent no. 5,928,471 (*Howland et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Howland* patent fails to provide for the deficiencies of the *Kaule* and *Hasegawa* patents, as discussed in detail above with respect to amended claim 1, from which claim 2 depends.

Accordingly, withdrawal of this rejection is respectfully requested.

5. Rejection of claims 12, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*) in view of U.S. patent no. 5,141,983 (*Hasegawa et al.*) and further in view of U.S. patent no. 6,715,750 (*Gerlier et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Gerlier* patent fails to provide for the deficiencies of the *Kaule* and *Hasegawa* patents, as discussed in detail above with respect to amended claim 1, from which claims 12, 19, and 20 depend.

Accordingly, withdrawal of this rejection is respectfully requested.

6. Rejection of claim 25 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*) in view of U.S. patent no. 5,141,983 (*Hasegawa et al.*) and further in view of U.S. patent no. 4,462,866 (*Tooth et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Tooth* patent fails to provide for the deficiencies of the *Kaule* and *Hasegawa* patents, as discussed in detail above with respect to amended claim 1, from which claim 25 depends.

In particular, while the *Tooth* patent discloses an overlay on a sheet which may be a liquid solution of a polymer which forms a film upon evaporation of solvent (col. 3, lines 53-54), as discussed in detail above, a person having ordinary skill in the art at the time the invention was made would not have substituted a physically drying liquid lacquer layer, for the UV-curable or chemically curable reaction lacquer or adhesive that forms the lower layer 4 of the *Kaule* patent, for the reasons discussed above.

Therefore, a person having ordinary skill in the art at the time the invention was made would not have substituted the overlay of the *Tooth* patent for the UV-curable or chemically curable reaction lacquer or adhesive that forms the lower layer 4 of the *Kaule* patent, and thus, a *prima facie* case of obviousness with respect to amended claim 1, from which claim 25 depends, cannot be established. Therefore, withdrawal of this rejection is respectfully requested.

7. Rejection of claims 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,820,971 (*Kaule et al.*) in view of U.S. patent no. 5,141,983 (*Hasegawa et al.*) and further in view of U.S. patent no. 6,059,914 (*Suss*) and further in view of U.S. patent no. 4,462,866 (*Tooth et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Suss* and *Tooth* patents fail to provide for the deficiencies of the *Kaule* and *Hasegawa* patents, as discussed in detail above with respect to claim 1, from which claims 22 and 23 depend.

Accordingly, withdrawal of this rejection is respectfully requested.

8. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

Please charge any additional fees required or credit any overpayments in connection with this paper to Deposit Account No. 02-0200.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,

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